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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,832	12/09/2003	Seyed-Ali Hajimiri	080374-0008 (B78848)	4396

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EXAMINER

NGUYEN, KHANH V

ART UNIT PAPER NUMBER

2817

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No. 10/731,832	Applicant(s) HAJIMIRI ET AL.	
	Examiner Khanh V. Nguyen	Art Unit 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-14 is/are rejected.
- 7) ☒ Claim(s) 6 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 5, 7-9, 11-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 5, the specification defined (R_f or resistor (104)) as "feed-through resistance". However, in claim 5, applicant stated "the feed-through resistance R_f further comprises an inductance L_p ." This appears to be unclear since resistor and inductor are two different elements having different functions/characteristics. Examiner suggests in claim 1, second limitation should be read as "*a feed-through circuit including a series-connected feed-through resistance R_f and feed-through capacitance C_f connected ...*" and claim 5 as "*wherein the feed-through circuit further ...*" Also see claim 13.

Regarding claim 2, it is not clear which "tank circuit" is intended and having the connection as claimed.

Regarding claims 3, 11, Fig. 2 shows R_s coupled to the input (V_{in}). Should "output impedance R_s " be --input impedance R_s --? And the "transconductance g_m ... is larger than $1/R_s$ " is unclear since the specification disclosed on page 9, equation 2 that " $G_m = 1/2R_s$ " or ($2G_m = 1/R_s$). As such G_m is smaller than $1/R_s$ not larger as claimed.

Art Unit: 2817

Regarding claim 7, recites the limitation "the tank circuit" in line 2. There is insufficient antecedent basis for this limitation in the claim. Note, claim 2 discloses "a tank circuit." Also, the combination of resistance, capacitance, and inductance in parallel is connected between voltage source (Vdd) and output (Vout) as shown in Fig. 2 and not the input as claimed in claim 2.

Regarding claims 8, 9, it is not clear which "feed-through resistance Rf" is intended in Fig. 6 since the specification failed to disclose which element in Fig. 6 is a "feed-through resistance Rf". Examiner also suggests that "feed-through resistance Rf" should be replaced with --feed-through circuit--. See above rejection regarding claims 1, 5.

Regarding claim 12, suggests "a resistive feed-through circuit" should be replaced with --a feed-through circuit--and also in claims 13, 14. A word "parallel" can be seen when two elements are connected between two points/nodes. As such, "resistance Rf coupled in parallel with the output ..." is incorrectly stated and the coupling as claimed appears to be in series.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

Art Unit: 2817

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 12, 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Hong et al. (6,768,380).

Regarding claims 1, 12, 14, Hong et al. (Figs. 1, 5) disclose an amplifier circuit comprising: a transistor/common gate amplifier (Q2) having an input terminal (source), an output terminal (drain), a control terminal (gate), and transconductance is inherent in the field effect transistor; a series connected feed-through resistor (R3) and feed-through capacitor (C1); a load (109) connected to the output; and wherein to control terminal of the transistor (Q2) is biased at a fixed voltage.

Claims 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Shiga (5,172,074).

Regarding claim 8, Shiga (Fig. 6) disclose a low noise multi-stage amplifier comprising: a first, second, and third stage (Q1-Q3), respectively, wherein each stage is coupled to an inductive degeneration (4, 13, 22).

Allowable Subject Matter

Claims 6, 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 6, 15 call for, among others, the common gate amplifier and a signal source impedance R_s satisfy the recited equation.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional reference (Ko et al. (5,926,069)) shows further analogous prior art circuitry.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh V. Nguyen whose telephone number is (571) 272-1767. The examiner can normally be reached from 8:00 AM - 3:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



KHANH V. NGUYEN
PRIMARY EXAMINER